

I claim:

1. A sealing device, comprising:
  - a body having an inner portion;
  - a first seal extending from the body in a direction away from the inner portion;
  - a second seal extending from the body in a direction away from the inner portion of the body, the second seal disposed axially from the first seal;
  - a third seal extending from the body in a direction toward the inner portion of the body;
  - a fourth seal extending from the body in a direction toward the inner portion of the body, the third seal disposed axially from the fourth seal, the third and fourth seals axially offset with respect to the first and second seals; and
  - a vent extending through the body, the aperture located between the third and fourth seals and between the first and second seals.
2. The device of claim 1, wherein a first axial distance separates the third and fourth seals from each other and a second axial distance that is greater than the first axial distance separates the first and second seals from each other.
3. The device of claim 1, wherein the first and second seals are axially disposed from the vent by substantially the same distance.
4. The device of claim 1, wherein the third and fourth seals are axially disposed from the vent by substantially the same distance.
5. The device of claim 1, wherein the body is made from an elastomer.
6. The device of claim 1, wherein the body is made from a soft polymer.

7. The device of claim 1, wherein the first and second seals are dimensioned to engage a shaft housing and the third and fourth seals are dimensioned to engage a shaft when the device is positioned between the shaft and the shaft housing.
8. The device of claim 1, wherein the seals are formed integral with the body.
9. The device of claim 1, wherein a first axial distance separates the third and fourth seals from each other and a second axial distance that is less than the first axial distance separates the first and second seals from each other.
10. A seal comprising:
  - a ring-like body having a center, an inner axially extending surface, and an outer axially extending surface located radially around the center;
  - a first projecting ring integrally formed with the body and extending from the outer axial surface in a radial direction away from the center of the body;
  - a second projecting ring integrally formed with the body and extending from the outer surface in a radial direction away from the center of the body, the second projecting ring axially disposed from the first projecting ring;
  - a third projecting ring integrally formed with the body and extending from the inner axial surface in a radial direction toward the center of the body;
  - a fourth projecting ring integrally formed with the body and extending from the inner axial surface in a radial direction toward the center of the body, the third projecting ring axially disposed from the fourth projecting ring; and
  - an aperture extending between the inner and outer axially extending surfaces of the body, and located between the first and second projecting rings and between the third and fourth projecting rings.

11. The seal of claim 10, wherein the third and fourth projecting rings are axially offset with respect to the first and second projecting rings.
12. The seal of claim 10, wherein a first axial distance separates the third and fourth projecting rings from each other and a second axial distance greater than the first axial distance separates the first and second projecting rings from each other.
13. The seal of claim 12, wherein the first and second projecting rings are axially disposed from the aperture by substantially the same distance.
14. The seal of claim 12, wherein the third and fourth projecting rings are axially disposed from the aperture by substantially the same distance.
15. The seal of claim 10, wherein the seal is made from an elastomer.
16. The seal of claim 10, wherein the seal is made from a soft polymer.
17. The seal of claim 10, wherein the first and second projecting rings are dimensioned to engage a shaft housing and the third and fourth projecting rings are dimensioned to engage a shaft when the seal is positioned between the shaft and the shaft housing.
18. The seal of claim 10, wherein the aperture is configured to connect a volume to the atmosphere.
19. The seal of claim 10, wherein the projecting rings are formed integral with the body.
20. The seal of claim 10, wherein a first axial distance separates the third and fourth projecting rings from each other and a second axial distance less than the first axial distance separates the first and second projecting rings from each other.

21. A surgical cutting device, comprising:

a housing having a first chamber, a second chamber, and a passage extending between the first and second chamber;

a vent defined by a channel extending through the housing from the passage;

a shaft having a first end located in the first chamber and a second end located outside of the housing, the shaft extending from the first chamber at the first end and through the passage and the second chamber to the second end;

a seal located between the shaft and the passage to separate the first chamber from the second chamber, the seal comprising:

a body having at least one inner surface positioned adjacent the shaft, at least one outer surface positioned adjacent the passage, and an aperture extending between the at least one inner surface and the at least one outer surface,

a first and second band projecting from and formed integral with the body, the first and second band each surrounding at least an axial portion of the outer surface of the body and dimensioned for sealing engagement with the passage, the first band axially disposed from the second band and the aperture; and

a third and fourth band projecting from and formed integral with the body, the third and fourth band each surrounding at least an axial portion of the inner surface of the body and dimensioned for sealing engagement with the shaft, the third band axially disposed from the fourth band and the aperture.

22. The device of claim 21, wherein the third and fourth bands of the seal are axially offset with respect to the first and second bands of the seal.

23. The device of claim 21, wherein a first axial distance separates the third and fourth bands of the seal from each other and a second axial distance greater than the first axial distance separates the first and second bands of the seal from each other.

24. The device of claim 21, wherein the first and second bands of the seal are axially disposed from the aperture by substantially the same distance.

25. The device of claim 21, wherein the third and fourth bands of the seal are axially disposed from the aperture by substantially the same distance.
26. The device of claim 21, wherein the seal is made from an elastomer.
27. The device of claim 21, wherein the seal is made from a soft polymer.
28. The device of claim 21, wherein the shaft is configured to reciprocate within the passage to perform cutting operations.
29. The device of claim 28, wherein the shaft has a circular cross-section.
30. The device of claim 21, wherein the shaft is configured to rotate to perform cutting operations.
31. The device of claim 21, wherein the shaft is hollow and the first chamber is configured to have a pressure that is different than a pressure outside the housing and resulting in a pressure differential, the pressure differential capable of causing fluid to travel through the shaft.
32. The device of claim 21, wherein the aperture in the seal is in communication with the channel of the housing.
33. The device of claim 21, wherein the bands are formed integral with the body.
34. The device of claim 21, wherein a first axial distance separates the third and fourth bands of the seal from each other and a second axial distance less than the first axial distance separates the first and second bands of the seal from each other.

35. A seal adapted to provide a sealing engagement between a shaft and a passage surrounding the shaft, the seal comprising:
- a body having at least one inner surface, at least one outer surface, and an aperture extending between the at least one inner surface and the at least one outer surface;
  - a first and second band projecting from the body, the first and second band each surrounding at least an axial portion of the outer surface of the body and dimensioned for sealing engagement with the passage, the first band axially disposed from the second band and the aperture located between the first and second band; and
  - a third and fourth band projecting from the body, the third and fourth band each surrounding at least an axial portion of the inner surface of the body and dimensioned for sealing engagement with the shaft, the third band axially disposed from the fourth band and the aperture located between the third and fourth band.
36. The seal of claim 35, wherein the third and fourth bands are axially offset with respect to the first and second bands.
37. The seal of claim 35, wherein a first axial distance separates the third and fourth bands from each other and a second axial distance greater than the first axial distance separates the first and second bands from each other.
38. The seal of claim 37, wherein the first and second bands are axially disposed from the aperture by substantially the same distance.
39. The seal of claim 37, wherein the third and fourth bands are axially disposed from the aperture by substantially the same distance.
40. The seal of claim 35, wherein the seal is made from an elastomer.
41. The seal of claim 35, wherein the seal is made from a soft polymer.
42. The seal of claim 35, wherein the seal is circular.

43. The seal of claim 35, wherein each band is formed integral with the body.
44. The seal of claim 35, wherein a first axial distance separates the third and fourth bands from each other and a second axial distance less than the first axial distance separates the first and second bands from each other.
45. A method of sealing a gap between a shaft and a shaft housing, the method comprising:
- inserting a seal between the shaft and the shaft housing, the seal including a body having at least one inner surface, at least one outer surface, and an aperture extending between the at least one inner surface and the at least one outer surface, a first and second band projecting from the body, the first and second band surrounding at least an axial portion of the outer surface of the body and dimensioned for sealing engagement with the shaft housing, the first band axially disposed from the second band and the aperture located between the first and second band; and a third and fourth band projecting from the body, the third and fourth band surrounding at least an axial portion of the inner surface of the body and dimensioned for sealing engagement with the shaft, the third band axially disposed from the fourth band and the aperture located between the third and fourth band;
- engaging the first and second band with the shaft housing;
- engaging the third and fourth band with the shaft;
- positioning the first band on a first side of a vent extending from the shaft housing; and
- positioning the second band on a second side of the vent opposite the first side.